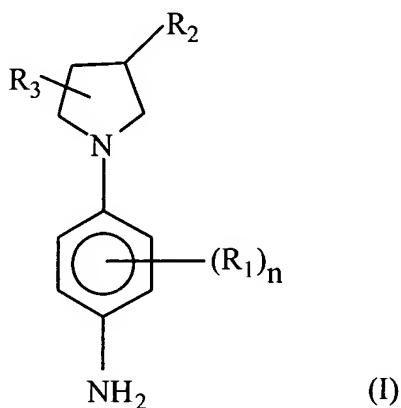


## I. AMENDMENT

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

1. (Currently Amended) A dyeing composition for dyeing keratinous fibres comprising, in an appropriate dyeing medium, at least one cationic tertiary para-phenylenediamine containing a pyrrolidine ring, and at least one organic diacid compound, wherein said cationic tertiary paraphenylenediamine containing a pyrrolidine ring corresponds to formula I:



in which

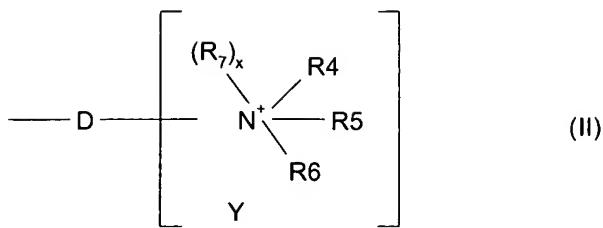
n varies from 0 to 4, it being understood that when n is greater than or equal to 2, then the radicals R<sub>1</sub> may be identical or different,

R<sub>1</sub> represents a halogen atom; a saturated or unsaturated, aliphatic or alicyclic, C<sub>1</sub>-C<sub>6</sub> hydrocarbon chain, it being possible for the chain to contain one or more oxygen, nitrogen, silicon or sulphur atoms or an SO<sub>2</sub> group, and it being possible for the chain to be substituted with one or more hydroxyl or amino radicals; an onium radical Z, the radical R<sub>1</sub> not containing a peroxide bond, or diazo, nitro or nitroso radicals.

R<sub>2</sub> represents an onium radical Z or a radical -X-C=NR<sub>8</sub>-NR<sub>9</sub>R<sub>10</sub> in which X represents an oxygen atom or a radical -NR<sub>11</sub> and R<sub>8</sub>, R<sub>9</sub>, R<sub>10</sub> and R<sub>11</sub> represent a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkyl radical or a C<sub>1</sub>-C<sub>4</sub> hydroxyalkyl radical,

R<sub>3</sub> represents a hydrogen atom or a hydroxyl radical.

2. (Canceled)
3. (Currently amended) The composition of claim [[2]] 1, in which the cationic tertiary para-phenylenediamine is such that n is equal to 0.
4. (Currently amended) The composition of claim [[2]] 1, in which the cationic tertiary para-phenylenediamine is such that n is equal to 1 and R<sub>1</sub> is chosen from the group consisting of a halogen atom; a saturated or unsaturated, aliphatic or alicyclic, C<sub>1</sub>-C<sub>6</sub> hydrocarbon chain; it being possible for one or more carbon atoms to be replaced by an oxygen, nitrogen, silicon or sulphur atom, or by an SO<sub>2</sub> group, the radical R<sub>1</sub> not containing a peroxide bond, or diazo, nitro or nitroso radicals.
5. (Currently Amended) The composition of claim [[2]] 1, in which the cationic tertiary para-phenylenediamine is such that R<sub>1</sub> is chosen from chlorine, bromine, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> hydroxyalkyl, C<sub>1</sub>-C<sub>4</sub> aminoalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy or C<sub>1</sub>-C<sub>4</sub> hydroxyalkoxy radicals.
6. (Original) The composition of claim 5, in which the cationic tertiary para-phenylenediamine is such that R<sub>1</sub> is chosen from a methyl, hydroxymethyl, 2-hydroxyethyl, 1,2-dihydroxyethyl, methoxy, isopropoxy or 2-hydroxyethoxy radical.
7. (Currently amended) The composition of claim [[2]] 1, in which the cationic tertiary para-phenylenediamine is such that R<sub>2</sub> represents the onium radical Z corresponding to formula (II)



in which

D is a single bond of a linear or branched C<sub>1</sub>-C<sub>14</sub> alkylene chain which may contain one or more heteroatoms chosen from oxygen, sulphur or nitrogen, and which may be substituted with one or more hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy or amino radicals and which may carry one or more ketone functional groups;

R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub>, taken separately, represent a C<sub>1</sub>-C<sub>15</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical; a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkoxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; an aryl radical; a benzyl radical; a C<sub>1</sub>-C<sub>6</sub> amidoalkyl radical; a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical; a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical in which the amine is mono- or di-substituted with a C<sub>1</sub>-C<sub>4</sub> alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, amido or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radical; or

R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> together, in pairs, form, with the nitrogen atom to which they are attached, a 4-, 5-, 6- or 7-membered saturated carbon ring which may contain one or more heteroatoms, it being possible for the cationic ring to be substituted with a halogen atom, a hydroxyl radical, a C<sub>1</sub>-C<sub>6</sub> alkyl radical, a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>6</sub> polyhydroxy-alkyl radical, a C<sub>1</sub>-C<sub>6</sub> alkoxy radical, a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, an amido radical, a carboxyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl radical, a thio (-SH) radical, a C<sub>1</sub>-C<sub>6</sub> thioalkyl (-R-SH) radical, a (C<sub>1</sub>-C<sub>6</sub>)alkylthio radical, an amino radical, an amino radical which is mono- or di-substituted with a (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, amido or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radical;

$R_7$  represents a  $C_1$ - $C_6$  alkyl radical; a  $C_1$ - $C_6$  monohydroxyalkyl radical; a  $C_2$ - $C_6$  polyhydroxyalkyl radical; an aryl radical; a benzyl radical; a  $C_1$ - $C_6$  aminoalkyl radical; a  $C_1$ - $C_6$  aminoalkyl radical whose amine is mono- or di-substituted with a  $(C_1$ - $C_6)$ alkyl,  $(C_1$ - $C_6)$ alkylcarbonyl, amido or  $(C_1$ - $C_6)$ alkylsulphonyl radical; a  $C_1$ - $C_6$  carboxyalkyl radical; a  $C_1$ - $C_6$  carbamylalkyl radical; a  $C_1$ - $C_6$  trifluoroalkyl radical; a tri( $C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radical; a  $C_1$ - $C_6$  sulphonamidoalkyl radical; a  $(C_1$ - $C_6)$ alkylcarboxy( $C_1$ - $C_6$ )alkyl radical; a  $(C_1$ - $C_6)$ alkylsulphiny( $C_1$ - $C_6$ )alkyl radical; a  $(C_1$ - $C_6)$ alkylsulphonyl( $C_1$ - $C_6$ )alkyl radical; a  $(C_1$ - $C_6)$ alkylcarbonyl( $C_1$ - $C_6$ )alkyl radical; an  $N$ -( $C_1$ - $C_6$ )alkylcarbamyl( $C_1$ - $C_6$ )alkyl radical; an  $N$ -( $C_1$ - $C_6$ )alkylsulphonamido( $C_1$ - $C_6$ )alkyl radical;

$x$  is 0 or 1,

when  $x$  = 0, then the linking arm is attached to the nitrogen atom carrying the radicals  $R_4$  to  $R_6$ ;

when  $x$  = 1, then two of the radicals  $R_4$  to  $R_6$  form, together with the nitrogen atom to which they are attached, a 4-, 5-, 6- or 7-membered saturated ring and  $D$  is linked to the carbon atom of the saturated ring;

$Y$  is a counter-ion.

8. (Original) The composition of claim 7, in which the cationic tertiary para-phenylenediamine is such that  $R_2$  corresponds to formula II in which  $x$  is equal to 0 and  $R_4$ ,  $R_5$  and  $R_6$  separately are preferably chosen from a  $C_1$ - $C_6$  alkyl radical, a  $C_1$ - $C_4$  monohydroxyalkyl radical, a  $C_2$ - $C_4$  polyhydroxyalkyl radical, a  $(C_1$ - $C_6)$ alkoxy( $C_1$ - $C_4$ )alkyl radical, a  $C_1$ - $C_6$  amidoalkyl radical, a tri( $C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radical, or  $R_4$  with  $R_5$  form together an azetidine ring, a pyrrolidine, piperidine, piperazine or morpholine ring,  $R_6$  being chosen in this case from a  $C_1$ - $C_6$  alkyl radical; a  $C_1$ - $C_6$  monohydroxyalkyl radical, a  $C_2$ - $C_6$  polyhydroxyalkyl radical; a  $C_1$ - $C_6$  aminoalkyl radical, an aminoalkyl radical which is mono- or di-substituted with a  $(C_1$ - $C_6)$ alkyl radical, a  $(C_1$ - $C_6)$ alkylcarbonyl, amido or  $(C_1$ - $C_6)$ alkylsulphonyl radical; a  $C_1$ - $C_6$  carbamylalkyl radical; a tri( $C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radical; a  $(C_1$ - $C_6)$ alkyl carboxy( $C_1$ -

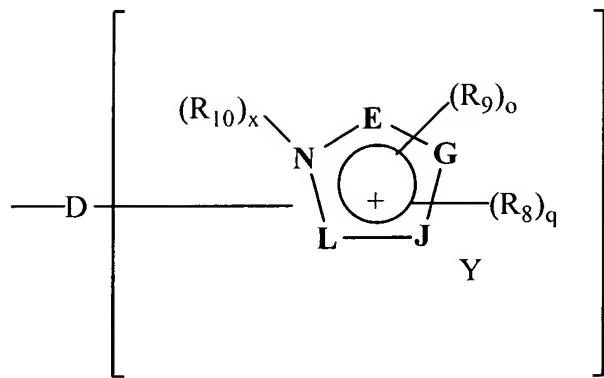
$C_6$ )alkyl radical; a  $(C_1-C_6)$ alkylcarbonyl( $C_1-C_6$ )alkyl radical; an  $N-(C_1-C_6)$ alkylcarbamyl( $C_1-C_6$ )alkyl radical.

9. (Original) The composition of claim 7, in which the cationic tertiary para-phenylenediamine is such that  $R_2$  corresponds to formula II in which  $x$  is equal to 1 and  $R_7$  is chosen from a  $C_1-C_6$  alkyl radical; a  $C_1-C_6$  monohydroxyalkyl radical; a  $C_2-C_6$  polyhydroxy-alkyl radical; a  $C_1-C_6$  aminoalkyl radical, a  $C_1-C_6$  aminoalkyl radical whose amine is mono- or di-substituted with a  $(C_1-C_6)$ alkyl,  $(C_1-C_6)$ alkylcarbonyl, amido or a  $(C_1-C_6)$ alkylsulphonyl radical; a  $C_1-C_6$  carbamylalkyl radical, a tri( $C_1-C_6$ )alkylsilane( $C_1-C_6$ )alkyl radical; a  $(C_1-C_6)$ alkylcarboxy( $C_1-C_6$ )alkyl radical; a  $(C_1-C_6)$ alkylcarbonyl( $C_1-C_6$ )alkyl radical; an  $N-(C_1-C_6)$ alkylcarbamyl( $C_1-C_6$ )alkyl radical;  $R_4$  with  $R_5$  together form an azetidine, pyrrolidine, piperidine, piperazine or morpholine ring,  $R_6$  being chosen in this case from a  $C_1-C_6$  alkyl radical; a  $C_1-C_6$  monohydroxyalkyl radical; a  $C_2-C_6$  polyhydroxyl alkyl radical; a  $C_1-C_6$  aminoalkyl radical; a  $C_1-C_6$  aminoalkyl radical whose amine is mono- or di-substituted with a  $(C_1-C_6)$ alkyl,  $(C_1-C_6)$ alkylcarbonyl, amido or  $(C_1-C_6)$ alkylsulphonyl radical; a  $C_1-C_6$  carbamylalkyl radical; a tri( $C_1-C_6$ )alkylsilane( $C_1-C_6$ )alkyl radical; a  $(C_1-C_6)$ alkylcarboxy( $C_1-C_6$ )alkyl radical; a  $(C_1-C_6)$ alkylcarbonyl( $C_1-C_6$ )alkyl radical; an  $N-(C_1-C_6)$ alkylcarbamyl( $C_1-C_6$ )alkyl radical.

10. (Original) The composition of claim 7, in which the cationic tertiary para-phenylenediamine is such that D is a single bond or an alkylene chain which may be substituted.

11. (Original) The composition of claim 7, in which the cationic tertiary para-phenylenediamine is such that  $R_2$  is a trialkylammonium radical.

12. (Currently amended) The composition of claim [[2]] 1, in which the cationic tertiary para-phenylenediamine is such that  $R_2$  represents the onium radical Z corresponding to formula III



(III)

in which

D is a single bond or a linear or branched C<sub>1</sub>-C<sub>14</sub> alkylene chain which may contain one or more heteroatoms chosen from oxygen, sulphur or nitrogen, and which may be substituted with one or more hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy or amino radicals, and which may carry one or more ketone functional groups;

the vertices E, G, J, L, which are identical or different, represent a carbon, oxygen, sulphur or nitrogen atom to form a pyrrole, pyrazole, imidazole, triazole, oxazole, isooxazole, thiazole, isothiazole ring,

q is an integer between 0 and 4 inclusive;

is an integer between 0 and 3 inclusive;

q+o is an integer between 0 and 4;

the radicals R<sub>8</sub>, which are identical or different, represent a halogen atom, a hydroxyl radical, a C<sub>1</sub>-C<sub>6</sub> alkyl radical, a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical, a C<sub>1</sub>-C<sub>6</sub> alkoxy radical, a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, an amido radical, a carboxyl radical, a C<sub>1</sub>-C<sub>6</sub> alkylcarbonyl radical, a thio radical, a C<sub>1</sub>-C<sub>6</sub> thioalkyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkylthio radical, an amino radical, an amino radical which is mono- or di-substituted with a (C<sub>1</sub>-

$C_6$ )alkyl,  $(C_1-C_6)$ alkylcarbonyl, amido or  $(C_1-C_6)$ alkylsulphonyl radical; a  $C_1-C_6$  monohydroxyalkyl radical or a  $C_2-C_6$  polyhydroxyalkyl radical; it being understood that the radicals  $R_8$  are carried by a carbon atom,

the radicals  $R_9$ , which are identical or different, represent a  $C_1-C_6$  alkyl radical, a  $C_1-C_6$  monohydroxyalkyl radical, a  $C_2-C_6$  polyhydroxyalkyl radical, a tri( $C_1-C_6$ )alkylsilane( $C_1-C_6$ )alkyl radical, a  $(C_1-C_6)$ alkoxy( $C_1-C_6$ )alkyl radical, a  $C_1-C_6$  carbamylalkyl radical, a  $(C_1-C_6)$ alkylcarboxy( $C_1-C_6$ )alkyl radical, a benzyl radical; it being understood that the radicals  $R_9$  are carried by a nitrogen,

$R_{10}$  represents a  $C_1-C_6$  alkyl radical; a  $C_1-C_6$  monohydroxyalkyl radical; a  $C_2-C_6$  polyhydroxyalkyl radical; an aryl radical; a benzyl radical; a  $C_1-C_6$  aminoalkyl radical, a  $C_1-C_6$  aminoalkyl radical whose amine is substituted with a  $(C_1-C_6)$ alkyl,  $(C_1-C_6)$ alkylcarbonyl, amido or  $(C_1-C_6)$ alkylsulphonyl radical; a  $C_1-C_6$  carboxyalkyl radical; a  $C_1-C_6$  carbamylalkyl radical; a  $C_1-C_6$  trifluoroalkyl radical; a tri( $C_1-C_6$ )alkylsilane( $C_1-C_6$ )alkyl radical; a  $C_1-C_6$  sulphonamidoalkyl radical; a  $(C_1-C_6)$ alkylcarboxy( $C_1-C_6$ )alkyl radical; a  $(C_1-C_6)$ alkylsulphonyl( $C_1-C_6$ )alkyl radical; a  $(C_1-C_6)$ alkylsulphonyl( $C_1-C_6$ )alkyl radical; a  $(C_1-C_6)$ alkylcarbonyl( $C_1-C_6$ )alkyl radical; an  $N-(C_1-C_6)$ alkylcarbamyl( $C_1-C_6$ )alkyl radical; an  $N-(C_1-C_6)$ alkylsulphonamido( $C_1-C_6$ )alkyl radical;

$x$  is 0 or 1

when  $x = 0$ , the linking arm D is attached to the nitrogen atom,

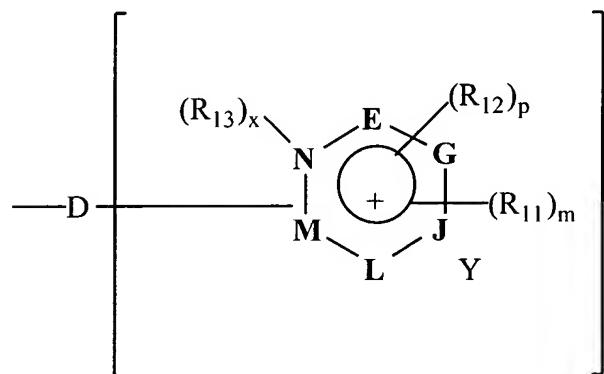
when  $x = 1$ , the linking arm D is attached to one of the vertices E, G, J or L,

Y is a counter-ion.

13. (Original) The composition of claim 12, in which the cationic tertiary para-phenylenediamine is such that the vertices E, G, J and L form an imidazole ring.

14. (Original) The composition of claim 12, in which the cationic tertiary para-phenylenediamine is such that x is equal to 0, D is a single bond or an alkylene chain which may be substituted.

15. (Currently amended) The composition of claim [[2]] 1, in which the cationic tertiary para-phenylenediamine is such that R<sub>2</sub> represents an onium radical Z corresponding to formula IV



(IV)

in which:

D is a single bond or a linear or branched C<sub>1</sub>-C<sub>14</sub> alkylene chain which may contain one or more heteroatoms chosen from an oxygen, sulphur or nitrogen atom, and which may be substituted with one or more hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy or amino radicals, and which may carry one or more ketone functional groups;

the vertices E, G, J, L and M, which are identical or different, represent a carbon, oxygen, sulphur or nitrogen atom to form a ring chosen from the pyridine, pyrimidine, pyrazine, triazine and pyridazine rings;

p is an integer between 0 and 3 inclusive;

m is an integer between 0 and 5 inclusive;

p+m is an integer between 0 and 5;

the radicals R<sub>11</sub>, which are identical or different, represent a halogen atom, a hydroxyl radical, a C<sub>1</sub>-C<sub>6</sub> alkyl radical, a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical, a C<sub>1</sub>-C<sub>6</sub> alkoxy radical, a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, an amido radical, a carboxyl radical, a C<sub>1</sub>-C<sub>6</sub> alkylcarbonyl radical, a thio radical, a C<sub>1</sub>-C<sub>6</sub> thioalkyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkylthio radical, an amino radical, an amino radical which is substituted with a (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, amido or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radical; a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical or a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical; it being understood that the radicals R<sub>11</sub> are carried by a carbon atom,

the radicals R<sub>12</sub>, which are identical or different, represent a C<sub>1</sub>-C<sub>6</sub> alkyl radical, a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical, a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkoxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, a C<sub>1</sub>-C<sub>6</sub> carbamylalkyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkylcarboxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, a benzyl radical; it being understood that the radicals R<sub>12</sub> are carried by a nitrogen,

R<sub>13</sub> represents a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical; a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical; an aryl radical; a benzyl radical; a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical, a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical whose amine is mono- or di-substituted with a (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, amido or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radical; a C<sub>1</sub>-C<sub>6</sub> carboxyalkyl radical; a C<sub>1</sub>-C<sub>6</sub> carbamylalkyl radical; a C<sub>1</sub>-C<sub>6</sub> trifluoroalkyl radical; a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a C<sub>1</sub>-C<sub>6</sub> sulphonamidoalkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkylcarboxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; an N-(C<sub>1</sub>-C<sub>6</sub>)alkylcarbamyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; an N-(C<sub>1</sub>-C<sub>6</sub>)alkylsulphonamido(C<sub>1</sub>-C<sub>6</sub>)alkyl radical;

x is 0 or 1

when  $x = 0$ , the linking arm D is attached to the nitrogen atom,

when  $x = 1$ , the linking arm D is attached to one of the vertices E, G, J, L or M,

Y is a counter-ion.

16. (Original) The composition of claim 15, in which the vertices E, G, J, L and M form, with the nitrogen of the ring, a ring chosen from pyridine and pyrimidine rings.

17. (Original) The composition of claim 15, in which the cationic tertiary para-phenylenediamine is such that  $x$  is equal to 0 and  $R_{11}$  is chosen from a hydroxyl radical, a  $C_1$ - $C_6$  alkyl radical, a  $C_1$ - $C_6$  monohydroxyalkyl radical, a  $C_2$ - $C_6$  polyhydroxyalkyl radical, a  $C_1$ - $C_6$  alkoxy radical, a tri( $C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radical, an amido radical, a  $C_1$ - $C_6$  alkylcarbonyl radical, an amino radical, an amino radical which is mono- or di-substituted with a ( $C_1$ - $C_6$ )alkyl, a ( $C_1$ - $C_6$ )alkylcarbonyl, amido or ( $C_1$ - $C_6$ )alkylsulphonyl radical; a  $C_1$ - $C_6$  monohydroxyalkyl radical or a  $C_2$ - $C_6$  polyhydroxyalkyl radical and  $R_{12}$  is chosen from a  $C_1$ - $C_6$  alkyl radical, a  $C_1$ - $C_6$  monohydroxyalkyl radical, a  $C_2$ - $C_6$  polyhydroxyalkyl radical, a tri( $C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radical, a ( $C_1$ - $C_6$ )alkoxy( $C_1$ - $C_6$ )alkyl radical, a  $C_1$ - $C_6$  carbamylalkyl radical.

18. (Original) The composition of claim 15, in which the cationic tertiary para-phenylenediamine is such that  $x$  is equal to 1 and  $R_{13}$  is chosen from a  $C_1$ - $C_6$  alkyl radical; a  $C_1$ - $C_6$  monohydroxyalkyl radical; a  $C_2$ - $C_6$  polyhydroxyalkyl radical; a  $C_1$ - $C_6$  aminoalkyl radical, a  $C_1$ - $C_6$  aminoalkyl radical whose amine is mono- or di-substituted with a ( $C_1$ - $C_6$ )alkyl radical, a ( $C_1$ - $C_6$ )alkylcarbonyl radical, an amido radical, a ( $C_1$ - $C_6$ )alkylsulphonyl radical; a  $C_1$ - $C_6$  carbamylalkyl radical; a tri( $C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radical; a ( $C_1$ - $C_6$ )alkylcarbonyl( $C_1$ - $C_6$ )alkyl radical; an N-( $C_1$ - $C_6$ )alkylcarbamyl( $C_1$ - $C_6$ )alkyl radical;  $R_{11}$  is chosen from a hydroxyl radical, a  $C_1$ - $C_6$  alkyl radical, a  $C_1$ - $C_6$  monohydroxyalkyl radical, a  $C_2$ - $C_6$  polyhydroxyalkyl radical, a  $C_1$ - $C_6$  alkoxy radical, a tri( $C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radical, an amido radical, a  $C_1$ - $C_6$  alkylcarbonyl radical, an amino radical, an amino radical which is mono- or di- substituted with a ( $C_1$ - $C_6$ )alkyl, ( $C_1$ - $C_6$ )alkylcarbonyl, amido or ( $C_1$ - $C_6$ )alkylsulphonyl radical; and  $R_{12}$  is chosen from a  $C_1$ - $C_6$  alkyl radical, a  $C_1$ - $C_6$  monohydroxyalkyl radical, a  $C_2$ - $C_6$  polyhydroxyalkyl

radical, a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkoxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, a C<sub>1</sub>-C<sub>6</sub> carbamylalkyl radical.

19. (Original) The composition of claim 15, in which the cationic tertiary para-phenylenediamine is such that R<sub>11</sub>, R<sub>12</sub> and R<sub>13</sub> are alkyl radicals which may be substituted.

20. (Currently amended) The composition of claim 12, in which the cationic tertiary para-phenylenediamine is such that the radical R<sub>2</sub> is the radical of formula -XP(O)(O-)OCH<sub>2</sub>CH<sub>2</sub>N<sup>+</sup>(CH<sub>3</sub>)<sub>3</sub> where X represents an oxygen atom or a radical -NR<sub>14</sub>, R<sub>14</sub> representing a hydrogen, a C<sub>1</sub>-C<sub>4</sub> alkyl radical or a hydroxyalkyl radical.

21. (Currently amended) The composition of claim [[2]] 1, in which the cationic tertiary para-phenylenediamine is such that the radical R<sub>2</sub> is a guanidine radical of formula -X-C=NR<sub>8</sub>-NR<sub>9</sub>R<sub>10</sub>, X represents an oxygen atom or a radical -NR<sub>11</sub>, R<sub>8</sub>, R<sub>9</sub>, R<sub>10</sub> and R<sub>11</sub> representing a hydrogen, a C<sub>1</sub>-C<sub>4</sub> alkyl radical or a hydroxyalkyl radical.

22. (Original) The composition of claim 1, in which the cationic tertiary para-phenylene is chosen from the group consisting of

[1-(4-Aminophenyl)pyrrolidin-3-yl]trimethylammonium chloride,

[1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyltetradecylammonium bromide

N'-[1-(4-Aminophenyl)pyrrolidin-3-yl]-N,N-dimethyl- guanidinium chloride

N-[1-(4-Aminophenyl)pyrrolidin-3-yl] guanidinium chloride

3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride

[1-(4-Aminophenyl)pyrrolidin-3-yl]-(2-hydroxyethyl)dimethylammonium chloride

[1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyl-(3-trimethylsilylpropyl)ammonium chloride

[1-(4-Aminophenyl)pyrrolidin-3-yl]-(trimethylammonium-hexyl)dimethylammonium dichloride

[1-(4-Aminophenyl)pyrrolidin-3-yl]oxophosphorylcholine

{2-[1-(4-Aminophenyl)pyrrolidin-3-yloxy]ethyl}trimethylammonium chloride

1-{2-[1-(4-Aminophenyl)pyrrolidin-3-yloxy]ethyl}-1-methylpyrrolidinium chloride

3-{3-[1-(4-Aminophenyl)pyrrolidin-3-yloxy]propyl}-1-methyl-3H-imidazol-1-ium chloride

1-{2-[1-(4-Aminophenyl)pyrrolidin-3-yloxy]ethyl}-1-methylpiperidinium chloride

3-{3-[1-(5-trimethylsilanylethyl-4-Amino-3- trimethylsilanylethylphenyl)pyrrolidin-3-yloxy]propyl}-1-methyl-3H-imidazol-1-ium chloride

[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]trimethylammonium chloride

[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]dimethyltetradecylammonium chloride

N'-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-N,N-dimethyl guanidinium chloride

N-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl] guanidinium chloride

3-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride

[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-(2-hydroxyethyl)dimethylammonium chloride

[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]dimethyl-(3-trimethylsilylpropylammonium chloride

[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-(trimethylammoniumhexyl-dimethylammonium dichloride

[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]oxophosphorylcholine

{2-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yloxy]ethyl}trimethylammonium chloride

1-{2-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yloxy]ethyl}-1-methylpyrrolidinium chloride

3-{3-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yloxy]-propyl} 1-methyl-3H-imidazol-1-um chloride

1-{2-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yloxy]ethyl}-1-methylpiperidinium chloride

[1-(4-Amino-3-trimethylsilanylethylphenyl)pyrrolidin-3-yl]trimethylammonium chloride

3-[1-(4-Amino-3-trimethylsilanylethylphenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride

3-{3-[1-(4-Amino-3-trimethylsilanylethylphenyl)pyrrolidin-3-yloxy]propyl}-1-methyl-3H-imidazol-1-um chloride

[1-(5-trimethylsilanylethyl-4-Amino-3-trimethylsilanylethylphenyl)pyrrolidin-3-yl]trimethylammonium chloride

3-[1-(5-trimethylsilanylethyl-4-Amino-3-trimethylsilanylethylphenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride

1'-(4-Aminophenyl)-1-methyl-[1,3']bipyrrolidinyl-1-ium chloride

1'-(4-Amino-3-methylphenyl)-1-methyl-[1,3']bipyrrolidinyl-1-ium chloride

3-{[1-(4-Aminophenyl)pyrrolidin-3-ylcarbamoyl]methyl}-1-methyl-3H-imidazol-1-ium chloride

3-{[1-(4-Amino-3-methylphenyl)pyrrolidin-3-ylcarbamoyl]methyl}-1-methyl-3H-imidazol-1-ium chloride

3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-(3-trimethylsilanylpropyl)-3H-imidazol-1-ium chloride

3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-(3-trimethylsilylpropyl)-3H-imidazol-1-ium chloride

[1-(4-aminophenyl)pyrrolidin-3-yl]ethyldimethylammonium chloride

[1-(4-aminophenyl)pyrrolidin-3-yl]ethyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]propyldimethylammonium iodide,

[1-(4-aminophenyl)pyrrolidin-3-yl]propyldimethylammonium bromide

[1-(4-aminophenyl)pyrrolidin-3-yl]propyldimethylammonium methosulphate

[1-(4-aminophenyl)pyrrolidin-3-yl]butyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]pentyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]hexyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]heptyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]octyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]decyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]hexadecyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]hydroxyethyldimethylammonium chloride

[1-(4-aminophenyl)pyrrolidin-3-yl]hydroxyethyldimethylammonium iodide.

23. (Original) The composition of claim 1, in which the cationic tertiary para-phenylene is chosen from the group consisting of [1-(4-Aminophenyl)pyrrolidin-3-yl]trimethylammonium chloride;

[1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyltetradecylammonium bromide;

N'-[1-(4-Aminophenyl)pyrrolidin-3-yl]-N,N-dimethyl guanidinium chloride

N-[1-(4-Aminophenyl)pyrrolidin-3-yl] guanidinium chloride

3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride;

[1-(4-Aminophenyl)pyrrolidin-3-yl](2-hydroxyethyl)dimethylammonium chloride

[1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyl-(3-trimethylsilylpropyl)ammonium chloride;

[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]trimethylammonium chloride

[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]dimethyltetradecylammonium chloride

N'-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-N,N-dimethyl guanidinium chloride

N-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl] guanidinium chloride

3-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride

[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-(2-hydroxyethyl)dimethylammonium chloride

[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]dimethyl-(3-trimethylsilylpropyl)ammonium chloride

1'-(4-Aminophenyl)-1-methyl-[1,3']bipyrrolidinyl-1-ium chloride

1'-(4-Amino-3-methylphenyl)-1-methyl-[1,3']bipyrrolidinyl-1-ium chloride

3-{[1-(4-Aminophenyl)pyrrolidin-3-ylcarbamoyl]methyl}-1-methyl-3H-imidazol-1-ium chloride

3-{[1-(4-Amino-3-methylphenyl)pyrrolidin-3-ylcarbamoyl]methyl}-1-methyl-3H-imidazol-1-ium chloride

3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-(3-trimethylsilylpropyl)-3H-imidazol-1-ium chloride

3-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-1-(3-trimethylsilylpropyl)-3H-imidazol-1-ium chloride

[1-(4-aminophenyl)pyrrolidin-3-yl]ethyldimethylammonium chloride

[1-(4-aminophenyl)pyrrolidin-3-yl]ethyldimethylammonium iodide

[1-(4-Aminophenyl)pyrrolidin-3-yl]propyldimethylammonium iodide,

[1-(4-aminophenyl)pyrrolidin-3-yl]propyldimethylammonium bromide

[1-(4-aminophenyl)pyrrolidin-3-yl]propyldimethylammonium methosulphate

[1-(4-aminophenyl)pyrrolidin-3-yl]butyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]pentyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]hexyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]heptyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]octyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]decyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]hexadecyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]hydroxyethyldimethylammonium chloride

[1-(4-aminophenyl)pyrrolidin-3-yl]hydroxyethyldimethylammonium iodide.

24. (Original) The composition of claim 1, in which the cationic tertiary para-phenylene is chosen from the group consisting of [1-(4-Aminophenyl)pyrrolidin-3-yl]trimethylammonium chloride

[1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyltetradecylammonium bromide

N'-[1-(4-Aminophenyl)pyrrolidin-3-yl]-N,N-dimethyl guanidinium chloride

N-[1-(4-Aminophenyl)pyrrolidin-3-yl] guanidinium chloride

3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride

[1-(4-Aminophenyl)pyrrolidin-3-yl]-2-hydroxyethyl)dimethylammonium chloride

[1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyl-(3-trimethylsilylpropyl)ammonium chloride

[1-(4-Aminophenyl)pyrrolidin-3-yl]-(trimethylammoniumhexyl)dimethylammonium dichloride

1'-(4-Aminophenyl)-1-methyl-[1,3']bipyrrolidinyl-1-ium chloride

3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-(3-trimethylsilylpropyl)-3H-imidazol-1-ium chloride

3-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-1-(3-trimethylsilylpropyl)-3H-imidazol-1-ium chloride

[1-(4-aminophenyl)pyrrolidin-3-yl]ethyldimethylammonium chloride

[1-(4-aminophenyl)pyrrolidin-3-yl]ethyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]propyldimethylammonium iodide,

[1-(4-aminophenyl)pyrrolidin-3-yl]propyldimethylammonium bromide

[1-(4-aminophenyl)pyrrolidin-3-yl]propyldimethylammonium methosulphate

[1-(4-aminophenyl)pyrrolidin-3-yl]butyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]pentyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]hexyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]heptyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]octyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]decyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]hexadecyldimethylammonium iodide

[1-(4-aminophenyl)pyrrolidin-3-yl]hydroxyethyltrimethylammonium chloride

[1-(4-aminophenyl)pyrrolidin-3-yl]hydroxyethyltrimethylammonium iodide.

25. (Original) The composition of claim 1, in which the cationic tertiary para-phenylene is chosen from the group consisting of

[1-(4-Aminophenyl)pyrrolidin-3-yl]trimethylammonium chloride

3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride

[1-(4-Aminophenyl)pyrrolidin-3-yl]-(2-hydroxyethyl)trimethylammonium chloride

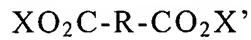
1'-(4-Aminophenyl)-1-methyl-[1,3']bipyrrolidinyl-1-ium chloride.

26. (Original) The composition of claim 1, in which the cationic tertiary para-phenylene is chosen from the group consisting of

[1-(4-Aminophenyl)pyrrolidin-3-yl]trimethylammonium chloride, and [1-(4-Aminophenyl)pyrrolidin-3-yl]-(2-hydroxyethyl)trimethylammonium chloride.

27. (Original) The composition of claim 1, in which the organic diacid compound is chosen from dicarboxylic acids, salts thereof and mixtures thereof.

28. (Original) The composition of claim 27, such that the organic diacid compound is chosen from the compounds of formula (V) and mixtures thereof:



(V)

in which R is a cyclic or acyclic, saturated or unsaturated, linear or branched, C<sub>2</sub>-C<sub>100</sub> hydrocarbon radical optionally interrupted by 1 to 30 heteroatoms chosen from O, N and S, and optionally substituted with 1 to 30 substituents chosen from a hydrogen atom, a hydroxyl (-OH) radical, an amino (-NH<sub>2</sub>) radical, a (C<sub>1</sub>-C<sub>30</sub>)alkylamino radical, a poly(C<sub>1</sub>-C<sub>30</sub>)alkylamino radical, a hydroxy(C<sub>1</sub>-C<sub>30</sub>)alkylamino radical, a polyhydroxy(C<sub>1</sub>-C<sub>30</sub>)alkylamino radical, a C<sub>6</sub>-C<sub>30</sub>, preferably C<sub>6</sub>-C<sub>15</sub>, aryl radical,

X and X', independently of each other, denote a hydrogen atom, an ammonium ion, a ion of an alkali metal such as Li, Na, K, or an alkaline earth metal such as Be, Mg, Ca or an ion derived from an organic amine.

29. (Original) The composition of claim 28, such that the compounds of formula (V) and mixtures thereof are such that R is a saturated, linear, C<sub>2</sub>-C<sub>100</sub> hydrocarbon radical.

30. (Original) The composition of claim 28, such that the compounds of formula (V) and mixtures thereof are such that X and X' are hydrogen atoms.

31. (Original) The composition of claim 28, such that the compounds of formula (V) and mixtures thereof are chosen from succinic acid, adipic acid, malic acid and malonic acid.

32. (Original) The composition of claim 28, such that the compounds of formula (V) and mixtures thereof are such that R is an unsaturated C<sub>10</sub>-C<sub>100</sub> hydrocarbon radical containing at least one double bond.

33. (Original) The composition of claim 32, in which the diacid is dilinoleic acid or maleic acid.

34. (Currently amended) The composition of claim 1, in which the cationic tertiary para-phenylenediamine(s) having a pyrrolidine ring represent from 0.001 to 10%, ~~and preferably from 0.005 to 6%~~ by weight relative to the total weight of the composition.

35. (Currently amended) The composition of claim 1, in which the organic diacid compound(s) represent from 0.01% to 30% by weight and preferably from 0.01% to 15% by weight relative to the total weight of the composition.

36. (Original) The composition of claim 1, such that it additionally contains at least one cationic polymer.

37. (Original) The composition of claim 1, such that it additionally contains at least one thickening polymer.

38. (Original) The composition of claim 1, such that it additionally contains at least one surfactant chosen from the group consisting of anionic surfactants, amphoteric or zwitterionic surfactants, nonionic surfactants and cationic surfactants.

39. (Original) The composition of claim 1, such that it comprises at least one additional oxidation base other than cationic tertiary para-phenylenediamines having a pyrrolidine ring chosen from para-phenylenediamines, bis-phenylalkylenediamines, para-aminophenols, ortho-aminophenols, heterocyclic bases and their addition salts.

40. (Currently amended) The composition of claim 39, in which the additional oxidation base(s) are present in a quantity of between 0.001 to 20% by weight and preferably between 0.005 and 6% by weight relative to the total weight of the composition.

41. (Original) The composition of claim 1, such that it additionally comprises at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, naphthalene couplers, heterocyclic couplers and their addition salts.

42. (Original) The composition of claim 41, such that the coupler is chosen from 1,3-dihydroxybenzene, 1,3-dihydroxy-2-methylbenzene, 4-chloro-1,3-dihydroxybenzene, 2,4-diamino-1-( $\beta$ -hydroxyethoxy)benzene, 2-amino-4-( $\beta$ -hydroxyethylamino)-1-methoxybenzene, 1,3-diaminobenzene, 1,3-bis(2,4-diaminophenoxy)propane, 3-ureidoaniline, 3-ureido-1-dimethylaminobenzene, sesamol, 1- $\beta$ -hydroxyethylamino-3,4-methylenedioxybenzene,  $\alpha$ -naphthol, 2-methyl-1-naphthol, 6-hydroxyindole, 4-hydroxyindole, 4-hydroxy-N-methylindole, 2-amino-3-hydroxypyridine, 6-hydroxybenzomorpholine, 3,5-diamino-2,6-

dimethoxypyridine, 1-N-( $\beta$ -hydroxyethyl)amino-3,4-methylenedioxybenzene, 2,6-bis( $\beta$ -hydroxyethylamino)toluene and their addition salts.

43. (Currently amended) The composition of claim 41, such that the coupler(s) are present in a quantity of between 0.001 and 20%, ~~preferably between 0.005 and 6%~~ by weight relative to the total weight of the composition.

44. (Original) The composition of claim 1, such that it additionally comprises at least one direct dye.

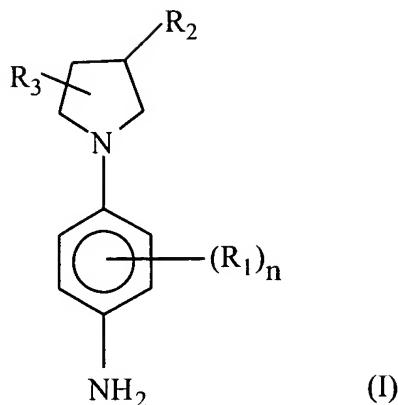
45. (Original) The composition of claim 1, such that it additionally comprises at least one hydroxylated solvent such as ethanol, propylene glycol, glycerol, polyol monoethers.

46. (Original) The composition of claim 1, such that it comprises at least one oxidizing agent chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts, peracids and oxidase enzymes, and preferably hydrogen peroxide.

47. (Original) A method for the oxidation dyeing of keratinous fibres, characterized in that a dyeing composition as defined in claim is applied to the fibres in the presence of an oxidizing agent.

48. (Original) A multicompartiment device in which the first compartment contains a dyeing composition for dyeing keratinous fibres, as defined in claim 1, and a second compartment contains an oxidizing agent.

49. (New) A dyeing composition for dyeing keratinous fibres comprising, in an appropriate dyeing medium, at least one cationic tertiary para-phenylenediamine containing a pyrrolidine ring, and at least one organic diacid compound, wherein said cationic tertiary paraphenylenediamine containing a pyrrolidine ring corresponds to formula I:



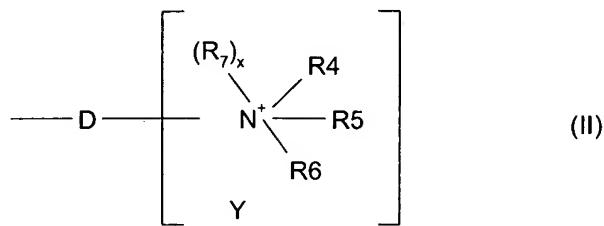
in which

n varies from 0 to 4, it being understood that when n is greater than or equal to 2, then the radicals R<sub>1</sub> may be identical or different,

R<sub>1</sub> represents a halogen atom; a saturated or unsaturated, aliphatic or alicyclic, C<sub>1</sub>-C<sub>6</sub> hydrocarbon chain, it being possible for the chain to contain one or more oxygen, nitrogen, silicon or sulphur atoms or an SO<sub>2</sub> group, and it being possible for the chain to be substituted with one or more hydroxyl or amino radicals; an onium radical Z, the radical R<sub>1</sub> not containing a peroxide bond, or diazo, nitro or nitroso radicals,

R<sub>3</sub> represents a hydrogen atom or a hydroxyl radical;

R<sub>2</sub> represents an onium radical Z selected from formula (II), formula (III) or formula (IV), wherein formula (II) corresponds to:



in which

D is a single bond of a linear or branched C<sub>1</sub>-C<sub>14</sub> alkylene chain which may contain one or more heteroatoms chosen from oxygen, sulphur or nitrogen, and which may be substituted with one or more hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy or amino radicals and which may carry one or more ketone functional groups;

R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub>, taken separately, represent a C<sub>1</sub>-C<sub>15</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical; a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkoxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; an aryl radical; a benzyl radical; a C<sub>1</sub>-C<sub>6</sub> amidoalkyl radical; a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical; a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical in which the amine is mono- or di-substituted with a C<sub>1</sub>-C<sub>4</sub> alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, amido or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radical; or

R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> together, in pairs, form, with the nitrogen atom to which they are attached, a 4-, 5-, 6- or 7-membered saturated carbon ring which may contain one or more heteroatoms, it being possible for the cationic ring to be substituted with a halogen atom, a hydroxyl radical, a C<sub>1</sub>-C<sub>6</sub> alkyl radical, a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical, a C<sub>1</sub>-C<sub>6</sub> alkoxy radical, a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, an amido radical, a carboxyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl radical, a thio (-SH) radical, a C<sub>1</sub>-C<sub>6</sub> thioalkyl (-R-SH) radical, a (C<sub>1</sub>-C<sub>6</sub>)alkylthio radical, an amino radical, an amino radical which is mono- or di-substituted with a (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, amido or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radical;

R<sub>7</sub> represents a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical; a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical; an aryl radical; a benzyl radical; a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical; a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical whose amine is mono- or di-substituted with a (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, amido or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radical; a C<sub>1</sub>-C<sub>6</sub> carboxyalkyl radical; a C<sub>1</sub>-C<sub>6</sub> carbamylalkyl radical; a C<sub>1</sub>-C<sub>6</sub> trifluoroalkyl radical; a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a C<sub>1</sub>-C<sub>6</sub> sulphonamidoalkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkylcarboxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkylsulphanyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a

(C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; an N-(C<sub>1</sub>-C<sub>6</sub>)alkylcarbamyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; an N-(C<sub>1</sub>-C<sub>6</sub>)alkylsulphonamido(C<sub>1</sub>-C<sub>6</sub>)alkyl radical;

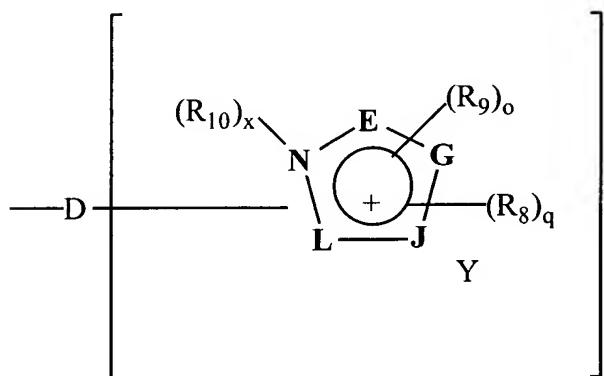
x is 0 or 1,

when x = 0, then the linking arm is attached to the nitrogen atom carrying the radicals R<sub>4</sub> to R<sub>6</sub>; with the proviso that when the linking arm D is a covalent bond then R<sub>4</sub> is chosen from or an aryl radical; a benzyl radical; a C<sub>1</sub>-C<sub>6</sub> amidoalkyl radical; a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical; a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical in which the amine is mono- or di-substituted with a C<sub>1</sub>-C<sub>4</sub> alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, amido or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radical; or;

when x = 1, then two of the radicals R<sub>4</sub> to R<sub>6</sub> form, together with the nitrogen atom to which they are attached, a 4-, 5-, 6- or 7-membered saturated ring and D is linked to the carbon atom of the saturated ring;

Y is a counter-ion;

and formula (III) corresponds to:



(III)

in which

D is a single bond or a linear or branched C<sub>1</sub>-C<sub>14</sub> alkylene chain which may contain one or more heteroatoms chosen from oxygen, sulphur or nitrogen, and which may be substituted with one or more hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy or amino radicals, and which may carry one or more ketone functional groups;

the vertices E, G, J, L, which are identical or different, represent a carbon, oxygen, sulphur or nitrogen atom to form a pyrrole, pyrazole, imidazole, triazole, oxazole, isooxazole, thiazole, isothiazole ring,

q is an integer between 0 and 4 inclusive;

o is an integer between 0 and 3 inclusive;

q+o is an integer between 0 and 4;

the radicals R<sub>8</sub>, which are identical or different, represent a halogen atom, a hydroxyl radical, a C<sub>1</sub>-C<sub>6</sub> alkyl radical, a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical, a C<sub>1</sub>-C<sub>6</sub> alkoxy radical, a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, an amido radical, a carboxyl radical, a C<sub>1</sub>-C<sub>6</sub> alkylcarbonyl radical, a thio radical, a C<sub>1</sub>-C<sub>6</sub> thioalkyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkylthio radical, an amino radical, an amino radical which is mono- or di-substituted with a (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, amido or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radical; a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical or a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical; it being understood that the radicals R<sub>8</sub> are carried by a carbon atom,

the radicals R<sub>9</sub>, which are identical or different, represent a C<sub>1</sub>-C<sub>6</sub> alkyl radical, a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical, a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkoxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, a C<sub>1</sub>-C<sub>6</sub> carbamylalkyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkylcarboxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, a benzyl radical; it being understood that the radicals R<sub>9</sub> are carried by a nitrogen,

R<sub>10</sub> represents a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical; a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical; an aryl radical; a benzyl radical; a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical, a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical whose amine is substituted with a (C<sub>1</sub>-

$C_6$ )alkyl,  $(C_1-C_6)$ alkylcarbonyl, amido or  $(C_1-C_6)$ alkylsulphonyl radical; a  $C_1-C_6$  carboxyalkyl radical; a  $C_1-C_6$  carbamylalkyl radical; a  $C_1-C_6$  trifluoroalkyl radical; a tri( $C_1-C_6$ )alkylsilane( $C_1-C_6$ )alkyl radical; a  $C_1-C_6$  sulphonamidoalkyl radical; a  $(C_1-C_6)$ alkylcarboxy( $C_1-C_6$ )alkyl radical; a  $(C_1-C_6)$ alkylsulphanyl( $C_1-C_6$ )alkyl radical; a  $(C_1-C_6)$ alkylsulphonyl( $C_1-C_6$ )alkyl radical; a  $(C_1-C_6)$ alkylcarbonyl( $C_1-C_6$ )alkyl radical; an  $N-(C_1-C_6)$ alkylcarbamyl( $C_1-C_6$ )alkyl radical; an  $N-(C_1-C_6)$ alkylsulphonamido( $C_1-C_6$ )alkyl radical;

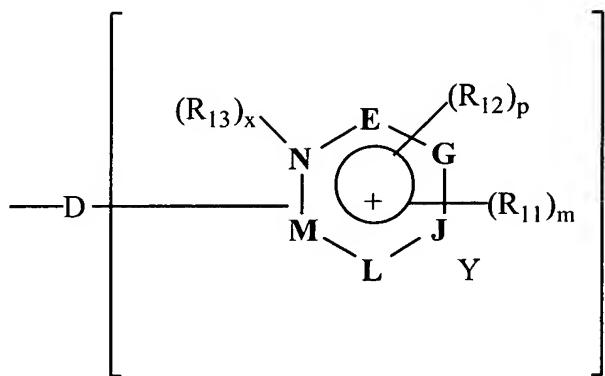
$x$  is 0 or 1

when  $x = 0$ , the linking arm D is attached to the nitrogen atom,

when  $x = 1$ , the linking arm D is attached to one of the vertices E, G, J or L,

Y is a counter-ion;

and formula (IV) corresponds to:



(IV)

in which:

D is a single bond or a linear or branched  $C_1-C_{14}$  alkylene chain which may contain one or more heteroatoms chosen from an oxygen, sulphur or nitrogen atom, and which may be substituted with one or more hydroxyl,  $C_1-C_6$  alkoxy or amino radicals, and which may carry one or more ketone functional groups;

the vertices E, G, J, L and M, which are identical or different, represent a carbon, oxygen, sulphur or nitrogen atom to form a ring chosen from the pyridine, pyrimidine, pyrazine, triazine and pyridazine rings;

p is an integer between 0 and 3 inclusive;

m is an integer between 0 and 5 inclusive;

p+m is an integer between 0 and 5;

the radicals R<sub>11</sub>, which are identical or different, represent a halogen atom, a hydroxyl radical, a C<sub>1</sub>-C<sub>6</sub> alkyl radical, a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical, a C<sub>1</sub>-C<sub>6</sub> alkoxy radical, a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, an amido radical, a carboxyl radical, a C<sub>1</sub>-C<sub>6</sub> alkylcarbonyl radical, a thio radical, a C<sub>1</sub>-C<sub>6</sub> thioalkyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkylthio radical, an amino radical, an amino radical which is substituted with a (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, amido or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radical; a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical or a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical; it being understood that the radicals R<sub>11</sub> are carried by a carbon atom,

the radicals R<sub>12</sub>, which are identical or different, represent a C<sub>1</sub>-C<sub>6</sub> alkyl radical, a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical, a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkoxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, a C<sub>1</sub>-C<sub>6</sub> carbamylalkyl radical, a (C<sub>1</sub>-C<sub>6</sub>)alkylcarboxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical, a benzyl radical; it being understood that the radicals R<sub>12</sub> are carried by a nitrogen,

R<sub>13</sub> represents a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical; a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical; an aryl radical; a benzyl radical; a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical, a C<sub>1</sub>-C<sub>6</sub> aminoalkyl radical whose amine is mono- or di-substituted with a (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, amido or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radical; a C<sub>1</sub>-C<sub>6</sub> carboxyalkyl radical; a C<sub>1</sub>-C<sub>6</sub> carbamylalkyl radical; a C<sub>1</sub>-C<sub>6</sub> trifluoroalkyl radical; a tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a C<sub>1</sub>-C<sub>6</sub> sulphonamidoalkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkylcarboxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkylsulphanyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radical; a (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radical;

$C_6$ )alkylcarbonyl( $C_1$ - $C_6$ )alkyl radical; an  $N$ -( $C_1$ - $C_6$ )alkylcarbamyl( $C_1$ - $C_6$ )alkyl radical; an  $N$ -( $C_1$ - $C_6$ )alkylsulphonamido( $C_1$ - $C_6$ )alkyl radical;

$x$  is 0 or 1

when  $x = 0$ , the linking arm D is attached to the nitrogen atom,

when  $x = 1$ , the linking arm D is attached to one of the vertices E, G, J, L or M,

Y is a counter-ion.